Memorandum

To: *Alice Yeh (USEPA)*
Elizabeth Buckrucker (USACE)

From: *Sharon Budney (CDM)*
George Molnar (CDM)

Date: *August 22, 2011*

Re: *Status Report (August 2011)*
CPG Oversight of Chemical Water Column Monitoring
Lower Passaic River Restoration Project

On behalf of the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE), Kansas City District, CDM Federal Programs Corporation (CDM) is providing oversight of the Cooperating Parties Group (CPG) remedial investigation/feasibility study (RI/FS) field activities associated with chemical water column monitoring (CWCM), and the collection of chemical data in the Lower Passaic River (LPR).

CDM oversight activities were conducted August 15 through August 17, 2011. Oversight included the observation of the collection of samples in the LPR and tributaries in support of the CPG CWCM study. In addition, CDM also collected split samples at select locations. All activities were conducted in accordance with the CPG *Quality Assurance Project Plan/Field Sampling Plan Addendum (QAPP/FSP), Remedial Investigation Water Column Monitoring/Small Volume Chemical Data Collection*, Revision 2, August 2011. The Louis Berger Group Inc. (LBI) conducted oversight of CWCM activities in Newark Bay. Oversight observations made by LBI staff are not included in this summary.

Photographs of field activities are in Attachment 1. Copies of the logbook notes are in Attachment 2. Copies of the chain of custody records are in Attachment 3.

General Summary
Oversight consisted of observations of in-river and field facility activities conducted by CPG contractors AECOM. Ocean Surveys Incorporated (OSI) provided vessel and sampling support.

All sample locations were verified by oversight staff using the map provided in CPG's QAPP/FSP. Due to heavy rainfall on August 14 and 15, flows in the LPR were considerably high. Review of the United States Geological Survey (USGS) gauging station at Dundee Damn indicated that maximum flow approached 3,000 cubic feet per second (cfs). A flow of 3,000 cfs is the maximum flow at which the sample event would be considered as one of five routine events planned throughout the course of the CWCM study.

Per AECOMs QAPP, if river flow velocities were greater than (>) 250 cfs at Dundee Dam samples would be collected at river mile (RM) 10.2 instead of 13.5. In addition, if flow at the dam is > 1,000 cfs, samples would be collected at RMs 4.2 and 6.7 instead of alternate locations based on the location of the salt wedge. AECOM followed this approach. In summary, the following locations were sampled during this sampling event:

- RM 10.2
- RM 6.7
- RM 4.2
- RM 1.4
- RM 0
- Above Dundee Dam
- Saddle River
- Second River
- Third River

Upon arrival at each RM location, CPG lowered a YSI water quality instrument to the bottom of the riverbed and then raised it while simultaneously collecting water quality data in real time. Attached to the instrument was sampling tubing attached to a remote pump located on the sampling vessel. After a full "cast", the instrument was lowered to approximately 3 feet above river bottom, and the pump was activated allowing the tubing to purge for 39 seconds followed by sample collection. Once all samples were collected at the lower depth, the instrument was raised to approximately 3 feet below river surface, the tubing was allowed to purge and another sample set was collected.

A similar approach was used above Dundee Dam and at the tributaries; however, samples were only collected from a single depth, approximately midway in the water column. The YSI and sampling tubing were deployed either off a bridge such as at Saddle River, or crews waded in such as at the Second and Third Rivers.

For this sampling event, certain parameters being analyzed from specific locations required a quick turn-around time (TAT) for results. Per EPA/USACE's request, an attempt was made to collect split samples from as many of these locations as possible. Of these locations, CDM was able to split samples for rapid TAT at the following locations:

- Second River
- RM 10.2 (during low slack tide)
- RM 1.4 (during maximum flood tide)
- RM 6.7 (during maximum ebb tide)

Throughout each day, samples were collected and shuttled back to the CPG facility for processing and packing. Oversight of activities at the CPG field facility conducted on August 15 and 16 indicated a relatively organized system of sample logging, labeling, chain of custody generation, and packing given the large volume of samples and bottleware involved. All sampling packing activities were conducted in accordance with AECOM's QAPP.

Summary of Daily Activities
The following is a summary of daily activities observed during CDM's oversight of CWCM activities:

Dundee Dam and Second River (August 15, 2011)
CDM oversight staff observed boat-based sample collection above Dundee Dam and collection of samples from Second River. At each location, a YSI water quality instrument obtained a profile of real-time measurements through the water column, followed by the collection of surface water from approximately mid-depth via pump and tubing mounted to the instrument.

Sampling at the Third River was scheduled; however, several delays, many of which were weather-related slowed down sampling activities. By the time crews arrived at the Third River location it was late in the day, and a thunderstorm was approaching so a decision was made to postpone sampling until a later date.

CDM oversight staff collected split samples at the Second River location. Split samples and corresponding CPG samples are presented in Table 1. Copies of CDM's signed chain of custodies can be found in Attachment 3.

RMs 10.2, 6.7, 4.2, and 1.4 (August 16, 2011)
CDM oversight staff observed boat-based sample collection at RMs 10.2, 6.7, 4.2, and 1.4. At each location, a YSI water quality instrument obtained a profile of real-time measurements through the water column, followed by the collection of surface water from approximately 3 feet above river bottom, and 3 feet below river surface via pump and tubing mounted to the instrument.

Per AECOM's QAPP, samples were collected four times over the period of one tidal cycle at each location beginning with low slack tide and ending at maximum ebb tide. Oversight crews observed one sampling event at each of the above mentioned RMs starting at RM 10.2 (low slack tide) followed by 1.4 (maximum flood tide), 4.2 (high slack tide), and 6.7 (maximum ebb tide). Split samples were collected at each location from the 3 feet below river surface interval. Split samples and corresponding CPG samples are presented in Table 1. Copies of CDM's signed chain of custodies can be found in Attachment 3.

RM 0 and Third River (August 17, 2011)
CDM oversight staff observed boat-based sample collection at RM 0 and at Third River. Oversight crews observed two sampling events, maximum flood and high slack tide at RM 0, and sampling at the Third River. At each location, a YSI water quality instrument obtained a profile of real-time water quality measurements through the water column. Similar to other locations on the LPR, samples collected from RM 0 were collected from approximately 3 feet above river bottom, and 3 feet below river surface via pump and tubing mounted to the instrument. At the Third River a single sample was collected at mid-depth.

No spilt samples were collected from RM 0 or Third River.

QAPP Compliance

All field activities were conducted in accordance with AECOM's QAPP procedures. "Clean hand" procedures were followed at best given the high volume of samples and containers, weather, and logistical issues. The "clean hand" field crew member would hold both the bottle and clean bag when sampling; however, this proved to be difficult at times especially when filling extra bottleware for split and quality control (QC) samples. In instances where the bag or bottle needed to be set down overstaff asked that the bags/bottles be placed on clean poly sheeting. AECOM followed their request.

Table 1
Cooperating Parties Group and CDM Split Sample Identification
August 2011 Chemical Water Column Monitoring Oversight
Lower Passaic River Restoration Project
Lower Passaic River, New Jersey

Location	CPG Sample ID	CDM Split Sample ID	QC Samples	Tide Event	Collection Date	Analysis
Second River	11A-CE05-T2R1-AS	11A-CE05-T2R1-AS-C		NA	8/15/2011	PAHs/Alkyl PAHs, pesticides, PCB congeners, PCDD/PCDF, metals plus Ti (total and dissolved), mercury and methyl mercury (total and dissolved), hexavalent chromium, TOC, DOC, POC, SSC, TDS
RM 1.4	11A-CE02-T014-AS	11A-CE02-T014-AS-C		maximum flood	8/16/2011	
		11A-CE02-T014-AT-C	Duplicate *	maximum flood	8/16/2011	
RM 4.2	11A-CE03-TTR2-AS	11A-CE03-TTR2-AS-C		high slack	8/16/2011	
RM 6.7	11A-CE04-TTR1-AS	11A-CE04-TTR1-AS-C	MS/MSD **	maximum ebb	8/16/2011	
RM 10.2	11A-CE01-T102-AS	11A-CE01-T102-AS-C		low slack	8/16/2011	

CPG - Cooperating Parties Group
DOC - dissolved organic carbon
ID - identification
MS/MSD - matrix spike/matrix spike duplicate
NA - not applicable; tributaries were not sampled over the course of a full tidal cycle
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/PCDF - polychlorinated dibenzodioxins/polychlorinated dibenzofurans
POC - particulate organic carbon
QC - quality control
SSC- suspended solids concentration
TDS - total dissolved solids
Ti - titanium
TOC - total organic carbon
* - field duplicate sample of CDM split sample 11A-CE02-T014-AS-C denoted with the prefix "T"
** - MS/MSD only for PAHs/Alky PAHs, metals, mercury, methyl mercury, hexavalent chromium, TOC, and DOC

Attachment 1
Photographs of Physical Water Column Monitoring Activities

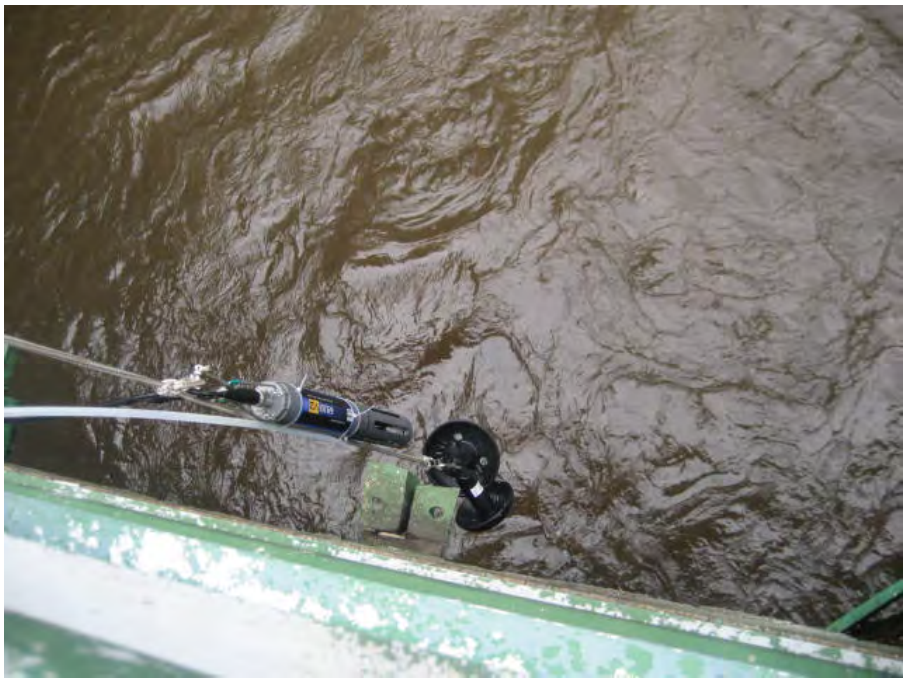

Photo 1. YSI and tubing being lowered into the Saddle River. Note the two anchors attached due to high flow conditions during sampling.

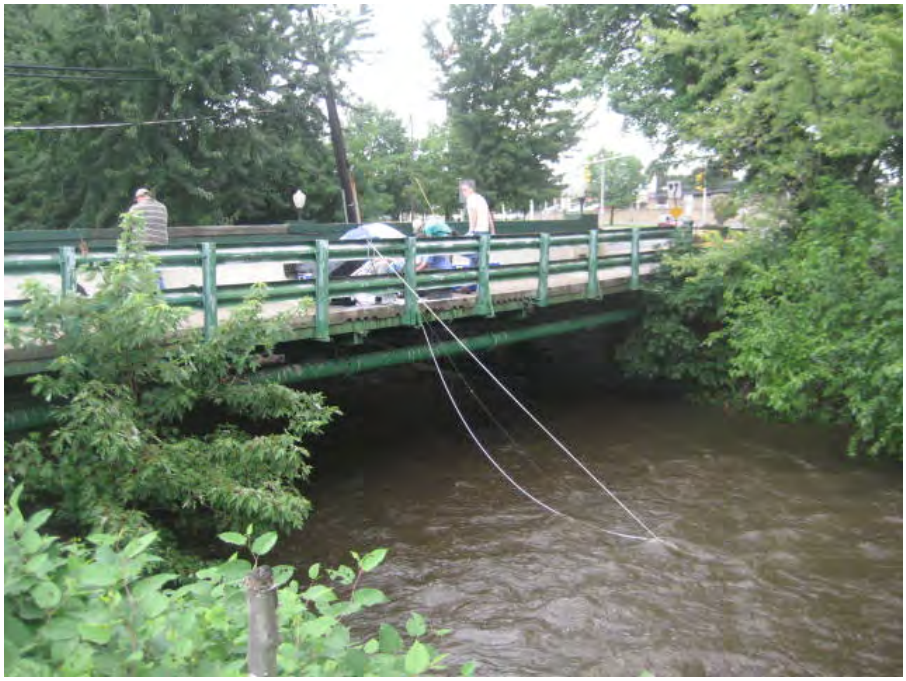

Photo 2. Crews sampling at the Saddle River.

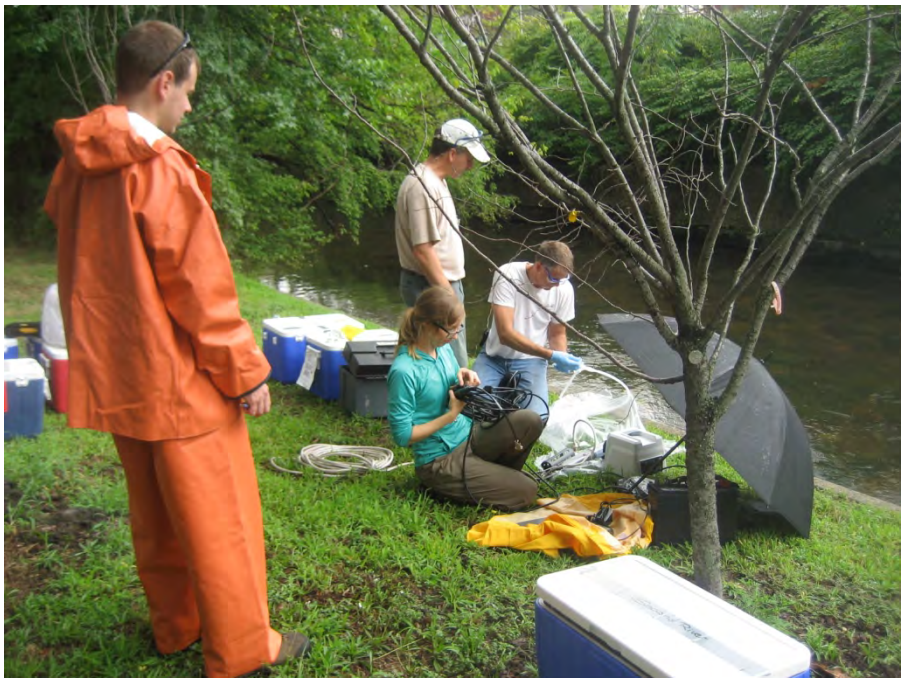

Photo 3. Crews setting up at the Second River.

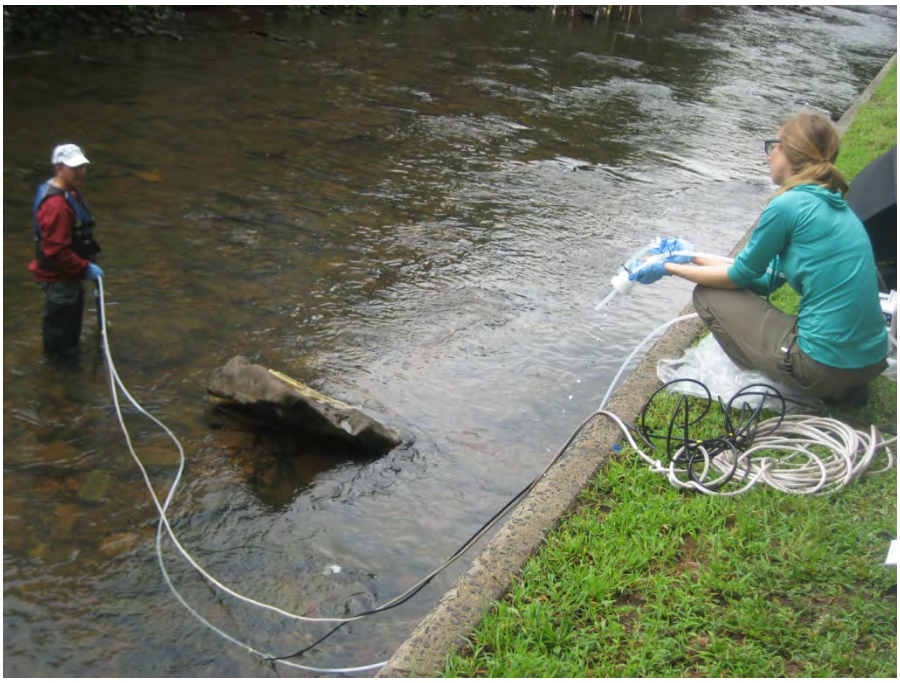

Photo 4. Crews sampling at Second River.

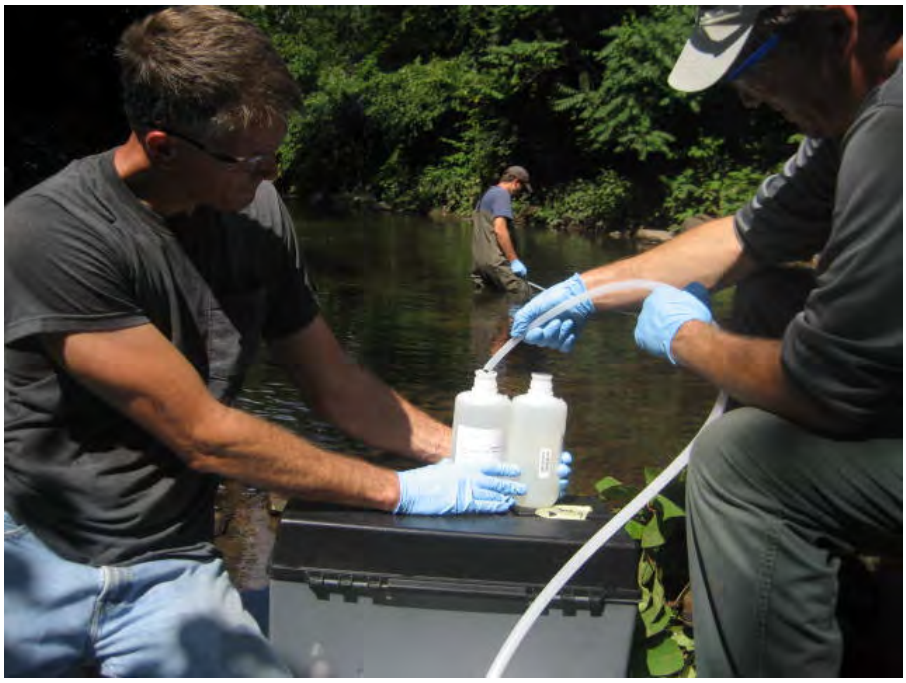

Photo 5. Crews sampling at Third River.

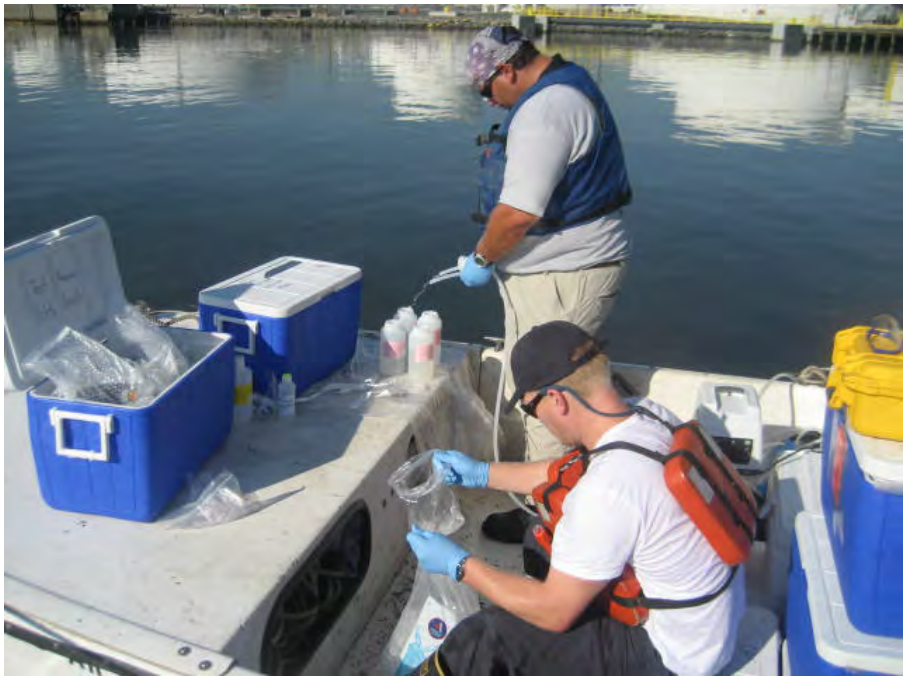

Photo 6. Crews sampling at RM 0.

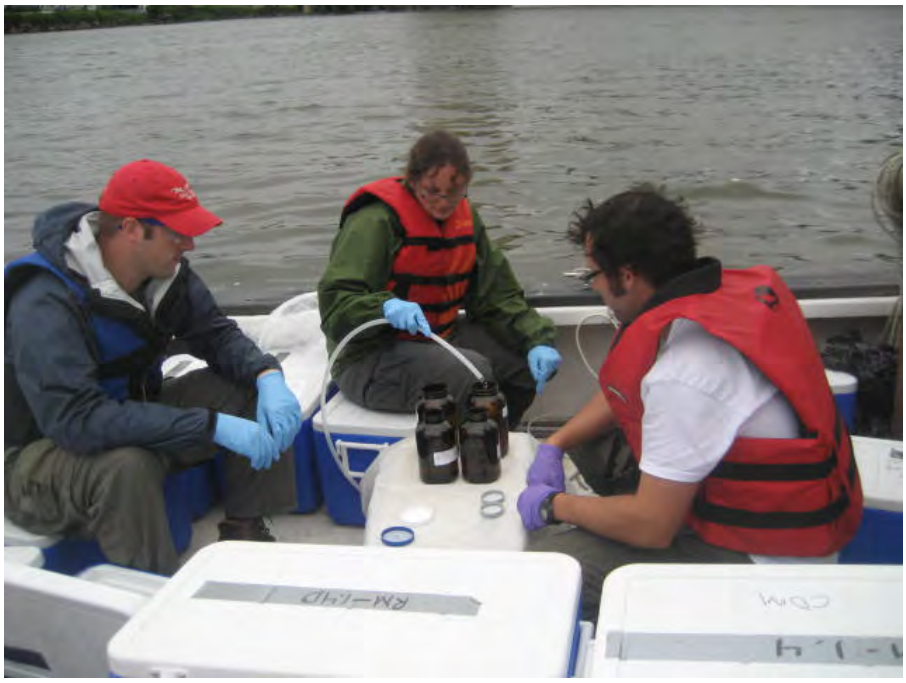

Photo 7. Oversight and CPG crews sampling and collecting split samples at RM 1.4.

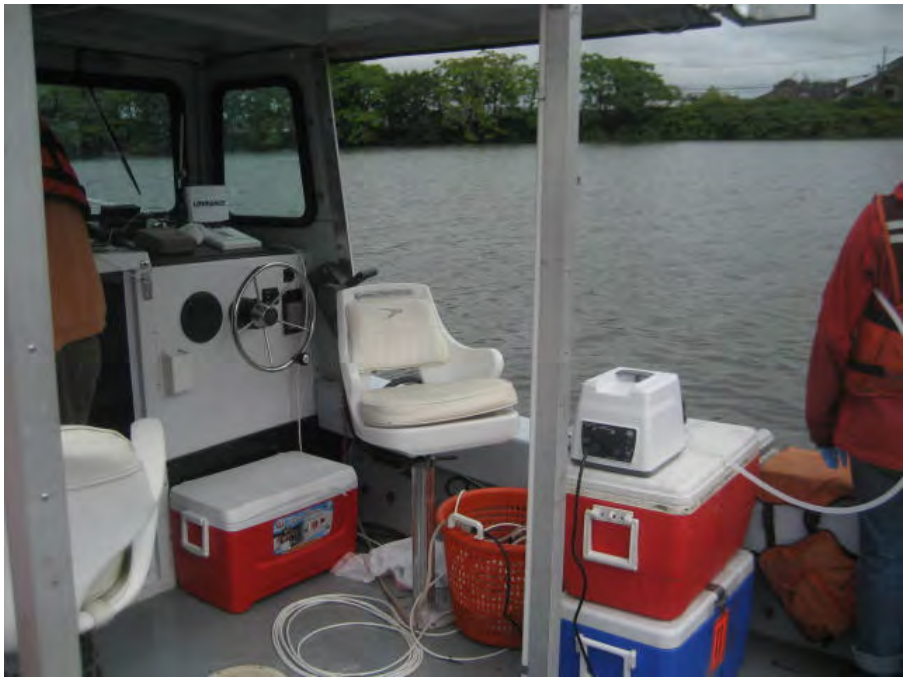

Photo 8. Pump and partial sampling equipment set up at RM 4.2.

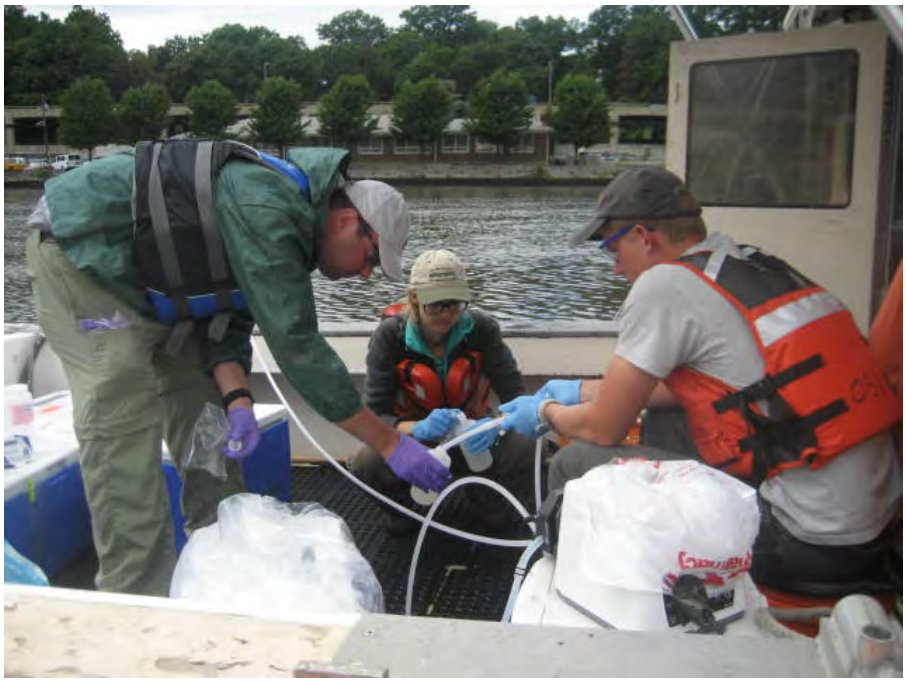

Photo 9. Crews sampling at RM 6.7.

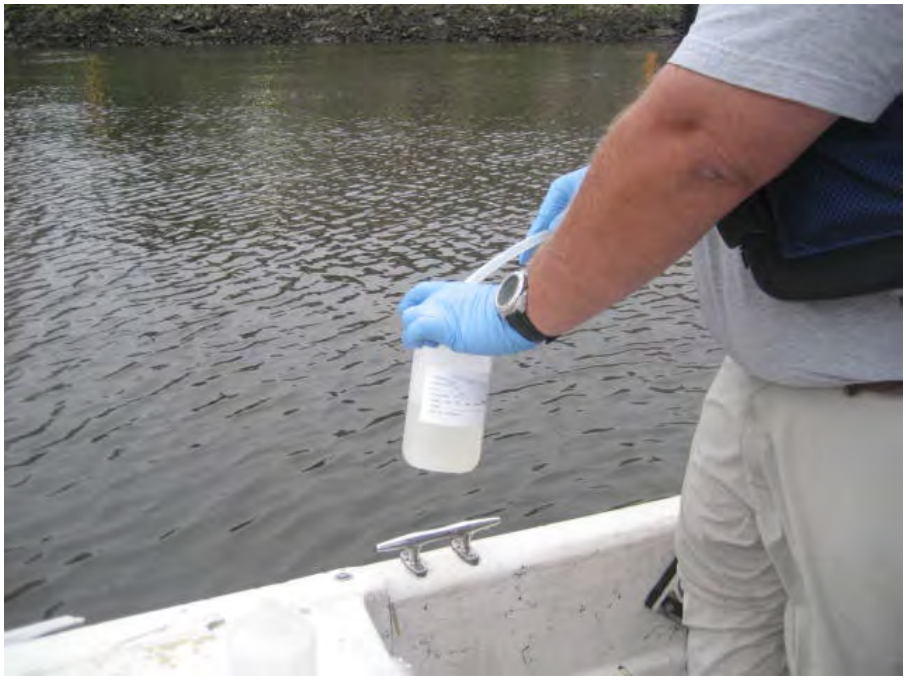

Photo 10. Crews sampling at RM 10.2.

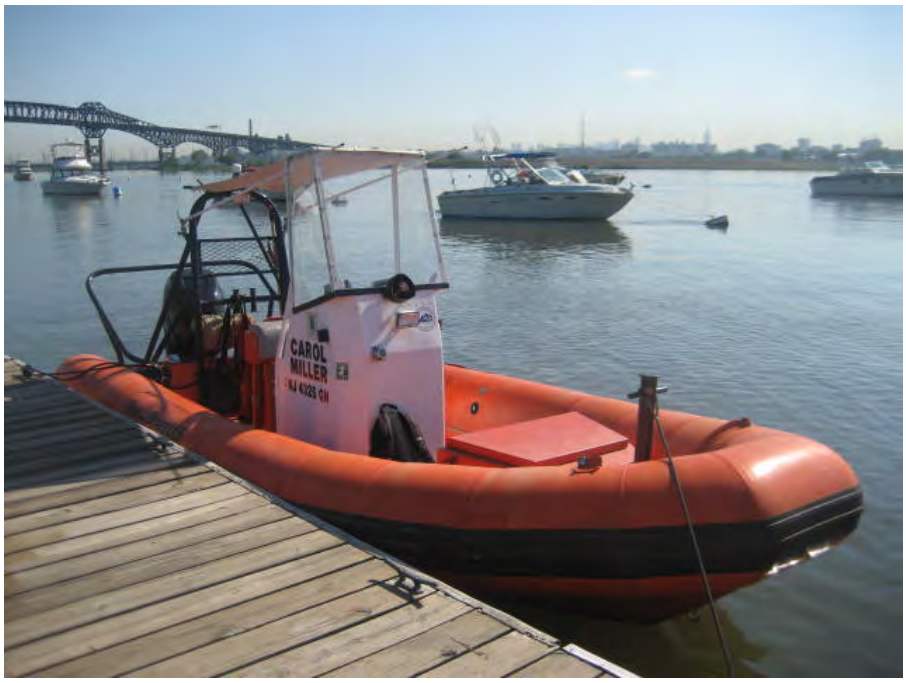

Photo 11. Vessel used for oversight activites.

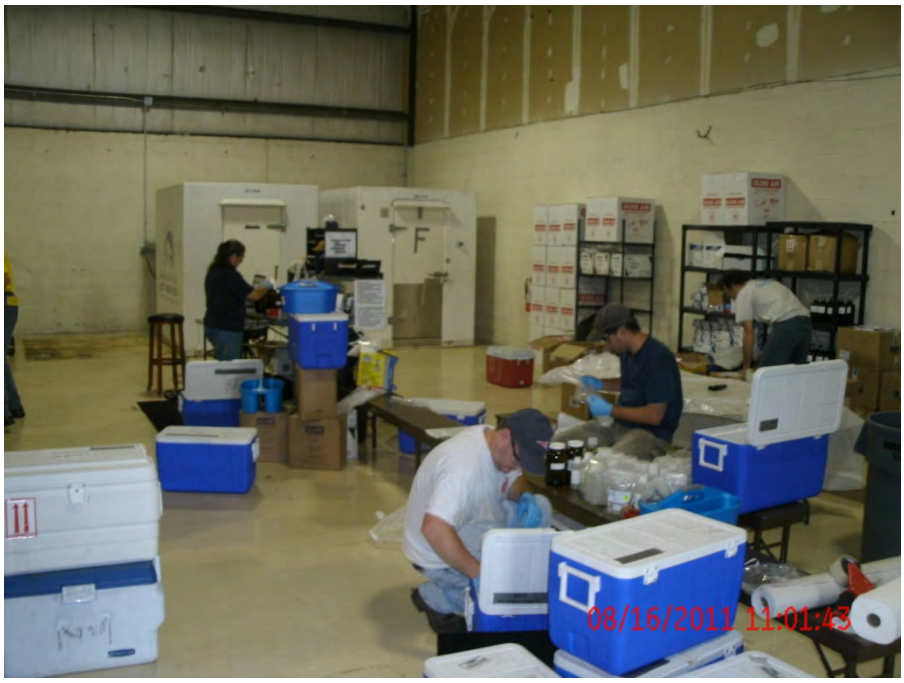

Photo 12. Crews processing/packing samples at the CPG facility.

Attachment 2

Copies of Oversight Field Logbook Notes

Location LPR Date 6/8/11

Project / Client Cage Bioaccumulation Study Day 90 / USACE

Total #s @ ea reach location
8AC - 4
7AB - 51
7ZZ - 50 + 30 = 80
6VV - 51
6UU - 52
Numbers verified between Windward + CDM
1420 GM departs CPG facility to do daily Ldesignum pictures + logbook.

@ 6/8/11

[signature] 6/8/11

Location LPR Date 8/16/11

Project / Client CWCM - George Molnar Oversight @ CPG Facility

1015 GM arrives @ CPG Facility + meets w/ AECOM Kristen Durocher. There were issues this morning w/ bridge clearance. ~~CF~~ @ Oversight staff unable to get under bridges due to high flow from so much rain.
Game plan is to fill bottleware for 6.7 @ 4.2 + then use 3rd River bottles to sample @ 6.7. No splits will be taken @ 3rd River tomorrow.
Currently bottleware for 10.2 + ~~4.2~~ 1.4 is correct. Sean is filling splits @ 4.2 with 6.7 bottleware + will fill 6.7 with 3rd River bottle ware.
GM makes observations of crews packing samples in warehouse. Everything looks OK.
Pics 1+2 crew packing up samples.
Crews using pre-preserved bottles - freezers on site for ice - Observed

[signature] 8/16/11

Location LPR Date 8/16/11

Project / Client CWCM - oversight of CPG facility

crews labeling & cleaning bottle ware. Labels get covered in tape & bottle inserted into foam lining or bubblewrap. Everything seems to be in line w/ LPR-G-06
George helps AECOM shuttle samples from 10:12. & John Rolfe will transport all 3rd tier bottles during pumps & take samples collected this morning.
Chris Whitton made observations of packing yesterday.
Pic computer set up now for generating COCs.
Don (602) 387-0532
10.2 4:47 11A-CE01-T102-AS-C
11A-CE03-TTR2-AS-C 10:50
1.4 + 1.4D 8:29 11A-CE02-T014-AS-C
1310 Don departs CPG facility. CW heads down to Kearny boat ramp to pick up samples & shuttle crews back to the facility.
~~1730 CW~~ 1730 CW arrives @ CW Meander & crews wrap up sampling
[signature] 8/16/11

Location Date

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06:40 → SO arrives on site and waits for Morgan Brunbauer and Chris Whitton.

06:50 → Chris Whitton & Morgan Brunbauer arrive on site and begin organizing cooler with correct bottleware and speak to Kristen Durocher of AECOM regarding schedule KD informs SO that sample scheme name may have changed from the original that was given to UCDM.

07:00 → CDM signs in and Kristen shows sample processing area. SO asks Kristin of AECOM if CDM can keep ice in one of their several freezers. Kristen informs SO that we can

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use freezer outside to store ice

09:00 → Set up at Saddle River and prepare YSI 6920 to take water quality parameters. OSI informed SO that YSI 6920 was calibrated prior to using instrument earlier this morning.

09:12 → OSI lowers YSI 6920 into Saddle River. OSI raises YSI out of water to add another weight due

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to due extreme high velocity of current from raining last night and early this morning. News reported over 1.8 inches fell last night.

09:17 → Lower YSI with tubing attached to bottom of the Saddle River

09:21 → AECOM begins purging at Saddle R1 location

Temp → 21

Sp. Cnd → 0.280

Sal → .15

Depth → 2.25

pH → 7.57

Turbidity → 34.7

DO% → 82.30

DO mg → 7.36

*Note → YSI was lowered across the middle of the bridge. AECOM allows peristaltic pump to purge a few minutes before

[signature] 8/15/11

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Project / Client CWCM / USACE

AECOM begins collecting sample

09:35 → AECOM begins collecting sample. Total depth is 2.25'. Due to strong current, AECOM is having trouble raising pump/YSI to the middle of the water column. Since turbidity was relatively low, AECOM decided to leave YSI at a few inches above bottom of river bottom. YSI is a few inches above river bottom collecting parameters from [illegible] of the YSI and is a few inches off the bottom of YSI. Water is being collected from ~6 inches off the bottom of the river bottom.

10:55 → AECOM is

[signature] 8/15/11

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still collecting samples at station 11A-CEOS-TSR1. AECOM collects points using GPS

11:34 → AECOM finishes collecting samples at location 11A-CEOS-TSR1. OSI downloads parameters from YSI and rises equipment out of water. Crews pack up equipment to leave to next location.

11:55 → Arrive back at CPG field facility. AECOM transfers samples over to processing station + informs SO that sampling teams will be split. MB + CW will sample remaining tributaries while SO heads above Dundee Dam to oversee sampling activities. SO relinquishes log-

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book to Morgan Grubaker.

1325 - Departed CPG field facility for Second River.

1345 - Arrive and set up on second River. Prepare YSI 6920 for deployment

MB 8/15/11

AECOM Location: CodeID: 11A-CEOS-TZR1-AS

1405 - Don (AECOM) enters stream for YSI Deployment
- Trouble with tubing causes delay in deployment

1415 - Don enters middle of stream and deploys YSI upstream of himself a few inches off bottom
- Moved to bottom of river to acquire depth to bottom

Temp	20.68°C	turbidity	1.70
SpecCond	0.64	DO%	97.30
Salinity	0.33	DO conc.	8.71
Depth	0.18		
pH	8.01	Depth to Bottom	.8

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1420 - AECOM begins purging
1425 - AECOM begins Sampling
- CW is "clean hands" for COM samples
- MB is "dirty hands" for sampling
1446 - Pump tubing blows out of peristaltic tubing. Steve (AECOM) uses clean gloves to reinsert tubing
1449 - Pumping resumes
1500 - Purge rate decreased during VOA sampling
1510 - Call by AECOM to confirm bottleware discrepency
1517 - Sampling resumes after confirmation
1545 - Sampling complete
1555 - Depart second River for Third River
1615 - Arrive at Third River. Heavy Rain, Limited Access to sampling location
1625 - Heavy Rain and Lightning
1630 - Lightening and Thunder

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1645 - Sampling Called due to Lightening and Thunder and Time
1650 - Depart Third River for CPG Field Station
1710 - Arrive back at CPG Field Station
1715 - Ambient blanks are poured
1730 - Cooler Packed with ice
1800 - Sean O'Hare returns to CPG facility
1820 - Chris Whitton departs CPG facility to drop off coolers at CDM Warehouse
1825 - offsight of packing process by SO and MB
1900 - SO and MB leave CPG facility, offsite for evening

8/15/11

MB

Location LPR Date 8/16/11

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SO takes authorship of logbook. SO ✓

03:15 → SO & MB arrive at facility and pick up ice.

03:30 → Chris Loughrey of Miller's Launch arrives at CPG facility launch. SO & MB load cooler / bottle wave onto boat

04:00 → Depart CPG dock en route to RM 10.2

04:20 → OSI engages en setting up on station

04:28 → CDM ties up to OSI boat after OSI sets up on station.

Weather → Overcast

PPE → Level D Modified

04:25 → OSI lowers YSI into water and records profile of water column.

Coordinates:

E → 592150.50

N → 719745.66

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Total Depth → 13'

Sample Depth → 10'

Initial water quality parameters

4:41 → AECOM begins purging at station 11A-CPG-10 for

4:47 → AECOM begins sampling - MB takes ownership of logbook

SO "dirty hands" for sampling, AECOM "clean hands" for sampling

bottom sample taken first

5:30 - Finished sampling bottom sample

5:39 - Begin sampling surface sample, Sample depth 3'

5:41 - tubing disconnects from Y splitter, AECOM changes with clean gloves

5:43 - Sampling resumes, SO from CDM is "dirty hands" AECOM is clean hands

6:05 - AECOM changes filter with clean hands

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6:09 - Sampling Resumes after filter Change

6:13 - Filter blows out of Y splitter AECOM changes filter again with clean hands

6:15 - Sampling resumes. Parmeters are listed below:

Bottom Interval

Temp → 22.21°C

Sal → .39 ppt

pH → 7.66

Turb → 25.57

DO → 85%

DO → 7.84 mg/L

Top Interval

Temperature → 22.13°C

Salinity → .39 ppt

pH → 7.64 ppt

Turbidity → 23.8 NTU

DO % → 85.9%

DO mg/L → 7.46

06:40 → CDM departs RM 10.2 and heads to RM 1.4.

07:15 → Arrive at RM 1.4 and call Helen of AECOM to inform her that CDM will be arriving at RM 1.4 around 07:20 AM. AECOM will wait for CDM.

07:28 → Begin collecting samples from 11A-CE02-T014-BS-C. YSI lowered YSI and recorded profile of water column. Parmeters for station are:

Temperature → 25.08°C

Salinity → 13.72 ppt

pH → 7.29

Turbidity → 73.9 NTU

DO % → 46.1

DO mg/L → 3.44

Total Depth → 13.79

Sample Depth → 10.79

Coordinates

N → 691198.2

E → 598008.3

* Note: CDM will only provide oversight at the

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bottom sample. CDM will be collecting a split sample and a duplicate at top location.
* For location at RM 10.2, all analyses were collected except for bacteria and protozoans.
08:08 → AECOM finishes collecting bottom sample and raises YSI out of the water. AECOM & YSI get ready to collect
08:20 → OSI preps YSI to begin sampling at top
08:29 → AECOM begins collecting surface sample, so "dirty hands" AECOM "clean hands" during sample collection
9:21 → AECOM completes surface sampling at River Mile 1.4
Water quality parameter from location 11A- can be seen below.
Temperature → 23.42°c

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Total Depth → 3.0
Salinity → 6.05°C
pH → 7.27
Turbidity → 9.0
DO % → 55
DO mg/L → 4.53
The GPS coordinates are the same as above
09:21
09:25 → OSI profiles water column after top interval sample is collected.
09:30 → CDM heads up to RM 6.7 but cannot pass under the Bridge St. Bridge, SO contacts CW & GM & CDM
10:00 → Arrive at RM 4.2. OSI lowers YSI down to depth to scan water column with YSI 6920.
10:10 → AECOM begins sampling at location 11A-GEOS-TTR2-BS at RM 4.2.

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*GM notifies SO that he will try to contact Kristen Durodoff AECOM and figure out if their transport vessel can pick up our samples and drop off to CWI at Kearny Point ramp

10:20 → GM informs SO that he will contact John Rolfe of DMT to drop off samples for location RM 6.7 and take CDM's split samples back to facility.

Water quality parameters from YSI sample below:

Temperature → 24.1°C

~~Sample~~ Depth → ~~2.74~~ 2.74'

Salinity → 10 ppt

pH → 6.98

Turbidity → 25.3 NTU

DO% → 44

DO mg/L → 3.49

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Total Depth → 24.05'

Coordinate System → NAD83

N → 692385.5

E → 588255.2

10:40 → AECOM completes collection of sample

11A-CE03-TTR2-BS

1045 → YSI is pulled from water

New tubing is inserted and lower to 3' below surface

Temperature: 22.66 °C

Sample Depth: 2.97'

Salinity: 1.68 ppt

pH: 7.15

Turbidity: 10.4 NTU

DO%: 62.1

DO mg/L: 5.32

Sample Time: 1050

11A-CE03-TTR2-AS-C → sample name

1140 → AECOM completes gw sampling (CWCM) at RM 4.2 and pulls YSI out of water. CDM collects sample at

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11A-CE03-TTR2-AS and all is completed. OSI profiles water column one final time for this event.

11:55 → John Rolfe of DMI arrives at RM 4.2 and picks up samples to take back to facility and drops off samples bottles for location RM 6.7

12:00 → There is not enough clearance at the Bridge Street Bridge, Miller CDM wait for tide to continue to go out.

12:40 → SO contacts Kristen Durocher of AECOM to inform her that CDM may not make it for the first sample.

13:30 → CDM ties off to OSI boat at station RM 6.7. OSI lowers YSI to profile water column.

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Water quality parameters for location 11A-CE04-TTR1-BS

Temperature → 22.58

Total Depth → 16.0

Sample Depth → 12.7'

Salinity → 0.19 ppt

pH → 7.58

Turbidity → 36.7 NTU

DO% → 77.7

DO mg/L → 6.72

Sample Time → 13:39

13:35 → AECOM begins purging tubing for 2 minutes.

Coordinates are in NAD 83

N → 702827.74'

E → 586128.31'

14:08 → Finish collection of 11A-CE04-TTR1-BS

OSI raises YSI and then lowers back down to collect water profile.

14:13 → AECOM sets up at 11A-CE04-TTR1-AS

SO 8/16/11

Location LPR Date 8/16/11

Project / Client CWCM / USACE

Parameters include

Temperature: 22.68

Sample depth: 2.73

Salinity: .2

pH 7.59

Turbidity 28.8

DO % 29.8

DO mg/L 6.89

Sample time: 1422

Sample ID: 11A-CE04-TTR1-AS-C

1442 - AECOM changes filter with "clean hands", sampling resumes

1525 - AECOM finishes purging. All Analyses besides bacteria and protozoa

1528 - OSI takes last YSI cast at River Mile 6.7

1530 - Depart River Mile 6.7

15:50 → CW meets SO & MB at / near Kenny Boat ramp and load coolers into van. Drive to CPG facility

16:20 → Arrive back at CPG facility and buy ice.

SO / [illegible] 8/16/11

Location LPR Date 8/16/11

Project / Client CWCM / USACE

16:40 → CW departs CPG facility en route to CDM warehouse. CW will meet with George Molnar and Dante Porzilli to pack coolers

17:00 → SO & MB are driving home.

Summary

CDM collected split samples at the following locations on 8/16/11 for SO:

11A-CE01-T102-AS-C (Failed)

11A-CE02-T014-AS-C

11A-CE02-T014-AT-C

11A-CE03-TTR2-AS-C

8/16/11

Location LPR Date 8/17/11

Project / Client CWCM / USACE

06:35 → SO arrives at Passaic Yacht Club. Lock is on gate so SO calls Dan Fretchner of AECOM to get combination.

06:40 → Chris Loughrey of Miller Boating arrives at Passaic Yacht Club and assists SO in loading supplies onto boat.

Weather → Clear skies ~ 88°F, light wind

PPE → Level D Modified

06:50 → Depart Passaic Yacht Club en route to RM 0

07:00 → Tie off to stiff (OSI) and AECOM informs SO that first sample 11A was collected at 5:05AM and sample 11A was collected at 5:50AM.

* Miller Boating gives

SO 8/17/11

Location LPR Date 8/17/11

Project / Client CWCM / USACE

health & safety meeting on wearing proper PPE (life-vest) and boat safety.

07:10 → AECOM informs CDM oversight that next sampling event will occur at 08:00 AM

07:50 → AECOM casts YSI to obtain profile of water column.

07:58 → OSI finishes cast. AECOM hooks tubing up to YSI meter using zip-ties and lowers unit back down to 16' and begins initial purge for ~2 minutes.

Total Depth → 19'

Temperature → 24.03°C

Sampling Depth → 15.64

Salinity → 17.59

pH → 5.47

Turbidity → 128.8 NTU

% DO → 52.5

SO 8/17/11

Location LPR Date 8/17/11

Project / Client CWCM / USACE

DO → 3.99 @
Coordinates for location:
N → 68321 6.9
E → 597436.9
~~Field~~ 11A-CE02-T000-BS
08:30 → AECOM finishes collecting samples at location 11A-CE02-T000-BS
08:35 → AECOM takes/removes old tubing and OSI makes matched cast with YSI.
08:40 → AECOM connects new tubing to peristaltic pump and purges initially for 591 seconds prior to collection of samples.
08:41 → Begin collecting sample 11A-CE02-T000-AS
Water quality parameters:
Temperature → 24.12
Sampling Depth → 3.98
Salinity → 13.8
pH → 7.4

SO 8/17/11

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Turbidity → 9.6
% DO → 53.13
DO → 4.15
* Coordinates have not changed from the top sample
09:12 → AECOM completes top interval sampling at 11A-CE02-T000-AS.
All analyses were collected at both intervals except Bacteria and Protozoans
09:13 → OSI conducts a 2nd cast of water profile after last sample.
09:22 → Depart back to Passaic Yacht Club to retrieve sunglasses and take photo of Miller's vessel.
AECOM informs CDM that they will wait at CPG at the Passaic Yacht Club for a little while before they go back and set up on location.

SO 8/17/11

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10:40 → Depart Passaic Yacht Club en route to location RM0.0

10:55 → CDM / Miller tie off to OSI vessel after anchoring to location.

11:01 → AECOM conducts initial purge for 89 seconds prior to start of sample collection

* 10:50 → OSI casts YSI to collect water profile Parameters include at location 11A

Temperature → 23.78 C

Sample Depth → 19.2' (Total Depth 20')

Salinity → 18.02

pH → 7.33

Turbidity → 4.7 NTU

% DO → 54.8

DO mg/L → 4.17

Coordinates

N → 683216.1

E → 597437.8

SO 8/17/11

Location LPR Date 8/17/11

Project / Client CWCM / USACE

OSI Personell include:
Dustin Koch
Jay DiLorenzo
Boat → Skiff
AECOM Personell are:
John Rolling
Ryan McCarthy
Sample location name is 11A-ICE03-T000-BS-G

11:20 → CDM departs back to Passaic Yacht Club.

11:30 → Arrive back at Yacht club en route to CPG facility in East Rutherford, NJ.

12:00 → Arrive back at CPG facility. SO takes photos of facility / sample packaging stations.

13:00 → Depart CPG facility en route to Third River

13:15 → Arrive at Third River. AECOM starts

SO 8/17/11

Location LPR Date 8/17/11

Project / Client CWCM / USACE

Putting together YSI equipment and getting ready to collect sample.

13:45 → AECOM lowers YSI into Third River and will start to purge for collect IIA-CE05-T3R1-AS.

People on location are: John Rolfe (CDM), George Pfeiffer (CDM), Dan Fredmer (AECOM), Jim Alderson (AECOM), & Steve Howe (AECOM).

Salinity → .33 ppt

Sample Depth → .46

Parameters include

Temperature → 21.5°C

Sp. Conductivity →

DO% → NA

DO mg/L → NA

pH → 8.104

* AECOM collected

Turb → 1.07

SO takes photos of loc.

SO-DT 8/17/11

Location LPR Date 8/17/11

Project / Client CWCM / USACE

14:35 → AECOM completes sampling at Third River. SO assists AECOM with transporting supplies into vehicles.

15:00 → SO departs site en route to drop off vehicle at Enterprise.

Summary

CDM provided oversight on the collection of:

IIA-CE02-T000-BS

IIA-CE02-T000-AS

IIA-CE03-T000-BS

IIA-CE05-T3R1-AS

8/17/11

Location EAST RUTHERFORD, NJ Date 11/4/10
Project / Client PASSAIC RIVER
3RD RIVER

(CONT'D.) 3RD RIVER
13²⁰ AECOM COLLECT GW SAMPLE @ 3RD RIVER (ER2)
PH: 7.32 T: 10.8°C
TURB: 50.4
13³⁰ I LEAVE SITE TO GET FRESH ICE @ 7/11 & CONTACT CDM W/ GW SAMPLING INFO & TIMES
14¹⁸ I LV. SITE FOR CDM WAREHOUSE
14⁵⁰ I ARR @ CDM WAREHOUSE FOR SAMPLE PREP & GET FRLITE PAPERWORK FROM VANESSA
18⁰⁰ I DELIVER GW SAMPLES TO DESA LABORATORY @ EPA EDISON COMPLEX

DAILY SUMMARY

- COLLECT GW SAMPLES:
  3RD RIVER + DUP ACK #1 + MS/MSD
  2ND RIVER SADDLE RIVER ACK #2

[signature] 11/4/10

Location East Rutherford, NJ Date 8/15/11
Project / Client Passaic River
CPG Facility

Weather: Overcast/Rain, ~65°F
PPE: Level D
CDM Personnel: C. Witton, S. O'Hara, M. Brubaker
0645 - CDM onsite at CPG Facility
0700 - AECOM is preparing for the day's sampling. CDM reviews our tasks for day.
0800 - OSI onsite. Health & Safety meeting held by AECOM. Discussion includes procedures for operating in the facility, boat safety, traffic safety, and weather safety.
0815 - Crews depart CPG facility for the river. CW departs to purchase ice.
0845 - CW returns to facility to begin bagging ice. AECOM personnel are organizing supplies.
1045 - Bagged ice for Mon. & Tues. is placed in outdoor freezer.
1100 - CW departs facility to locate Kearny dock.
12:30 → CW relinquishes logbook to SO of CDM
12:50 → SO speaks with George Molnar and discusses change of plans regarding splitting teams

[signature] 8/15/11

Location LPR Date 8/15/11

Project / Client CWCM / USACE

btn the the remaining tributaries and above Dundee Dam.

13:15 → SO discusses sample routine with CW & MB. CW & MB will collect CDM split samples with AECOM at the Second River and Third River. SO will oversee sampling above Dundee Dam. SO Reports to boat launch above Dundee Dam.

13:30 → OSI launches boat and all parties (AECOM & CDM) board vessel and depart launch to sample location NA-CEOS-T175-AS

14:00 → OSI arrives on location and drops anchor. AECOM sets up tubing and peristaltic pump.

14:10 → AECOM continues setting up while OSI

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collects profile of water column.

14:14 → OSI attaches tubing to the side of YSI 6920 and lowers to middle of water column

14:17 → AECOM sets up peristaltic pump for the initial purge at a rate of 2 Liters per minute for 20 seconds.

14:20 → AECOM begins collecting samples at location NA-CEOS-T175-AS above Dundee Dam. ~~Note~~ Note: SO takes photos of sampling process. It is important to note that AECOM is switching on/off collecting Filtered Samples and non-filtered samples. AECOM notifies SO that a duplicate will be

SO 8/15/11

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collected above Dundee Dam
ford is named 11A-CE05-
T175-AT
The order in which analyses
are collected are as follows
1.) Methyl Mercury (SU/F)
2.) Low Level Mercury (SU/F
3.) TAL Metals & Ti (SU/F)
4.) Hexavalent Chromium
5.) VOCs
6.) ~~TOC~~ ~~8260~~ 8/15/11 ~~Cyanide~~ Ammonia-N, TKN, Total P, TOC
7.) ~~POC/DOC~~ ~~Total~~ 8/15/11 Sulfide
8.) ~~Bacteria~~ 8260 8/15/11 Alkalinity, Sulfide, Chlorid
9.) Total Sulfide 10.) Cyanide
11.) SVOCs 12.) PAH's
13.) Pesticides 14.) PCB 15.) PCDD/PCDF
16.) SSC/TDS 17.) Butyltins
18.) Chlorophyll 19.) Biodegr 20.) Radiochem
14:45 → OSI experiences trouble with DO probe & YSI and stops sampling process. OSI removes YSI out of water and takes a look at the probe.

SOW 8/15/11

Location LPR Date 8/15/11

Project / Client CWCM / USACE

15:00 → OSI determines after troubleshooting that YSI needs to be replaced. OSI heads back to boat launch to pick up a YSI replacement.
15:20 → Helen Jones & Erin Hopkins of AECOM inform SO that samples collected so far will be kept. Once OSI returns with a replacement unit, AECOM will return to location and continue sampling. AECOM will change sample location to indicate that this sample location had to be resampled. Location name is changed to 11A-CEAS-T175-AT.
Original Coordinates
E → 594533.9
N → 847560.4

SOW 8/15/11

Location LPR Date 8/15/11

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16:04 → OSI receives replacement YSI and travels to location 11A-CEAS-T175-AT

16:10 → SO informs GM that samples will most likely arrive at CDM warehouse in Edison by 7 PM. GM will discuss possibility of keeping samples on ice overnight and shipping out tomorrow. GM will ~~call~~ check w/ MB. ~~informs SO~~ [SO 8/15/11] that Second River is complete. Sampling crews will be setting up at Third River to begin sampling shortly.

16:20 → OSI collects water profile after setting up on location. AECOM continues to collect samples.

16:23 → AECOM collects

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samples from location

17:05 → Complete collection of samples at location 11A-CEAS-T175-AT

Station Depth → 8'

Sample Depth → 3.95'

Salinity → .19

pH → 7.66

~~DO~~ → 86.89 %

DO → 7.65 mg/l

Turb → 15.2 NTU

Coordinates →

N → 747557.5

E → 594533.0

17:30 → Arrive back at boat launch and unload supplies. OSI takes CAT out of water and relaunch boat at Ashley boat launch and dock vessel at CPG dock.

18:00 → SO arrives back at CPG facility and meet

SO 8/15/11

Location LPR Date 8/15/11

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with MB & CW. CW will depart site shortly and drop off samples collected from Second River and ambient blanks. MB informs SO to ask AECOM if they will be using one sample time and if CDM can meet up later at RM1.4 if they cannot finish collecting sample at RM10.2

18:30 → TD of AECOM informs SO that only one time will be recorded per each sample location and that CDM can wait until after sample is collected at RM1.4 if they do not arrive in time. SO & MB discuss packing of coolers and take photos of processing stations.

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Location LPR Date 8/15/11

Project / Client CWCM / USACE

19:00 → SO & MB depart site en route to hotel.

Summary

CDM provided oversight of the following locations

- 11A-CEOS-TSR1
- 11A-CEOS-T17S-AS
- 11A-CEOS-T17S-AT
- 11A-CEAS-T17S-AS
- 11A-CEAS-T17S-AT
- 11A-CEOS-T2R1-AS

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Location LPR Date 8/16/11

Project / Client CWCM / USACE

Weather: Overcast

PPE: Level D Modified

0800 - C. Whitton arrives in East Rutherford. Proceeds to purchase ice.

0830 - CW onsite at CPG facility. Buys ice for use later in the day

0925 - Place excess ice in outdoor walk-in freezer

0930 - Departs for Kearny dock.

0945 - CW arrives at boat ramp. CDM's boat with SO & MB aboard cannot pass under the Bridge St. Bridge due to high tide and storm water conditions. and cannot make rendezvous

1030 - Depart Kearny for CPG facility.

1045 - CW at facility. George Molnar (CDM) is onsite. Discuss contingency plans for switching coolers with SO & MB.

11:00 - Remaining ice is bagged.

1530 - EW returns to Kearny dock.

1545 - SO & MB's last sample collection nearly complete but the water at the dock is too low to disembark there. New drop-off location is in Applebee's parking

1545 - SO & MB disembark with samples and team returns to CPG facility.

1630 - CW signs out of facility and is offsite w/ samples

Chain of Custody Sheet

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Location Date

Project / Client

Attachment 3
Copies of Signed Chain of Custodies

USEPA Contract Laboratory Program
Generic Chain of Custody

AXYS 1

Reference Case
Client No:
SDG No:
L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8763 6411 7688
Shipped to:	AXYS Analytical Services Ltd. 2045 Mills Road W. Sidney, BC V8L 5X2 (888) 373-0881

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 CW	8/16/11 1515		
2			
3			
4			

Sampler Signature: CW

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE05-T2R1-AS-C	Surface Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (4)	11A-CE05-T2R1-AS-C	S: 8/15/2011	14:25	
AB-08152011	Ambient Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (4)	AB-08152011	S: 8/15/2011	17:15	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___

PAH/ALKYL = PAH and Alkylated PAH compounds (SW-84, PCB-Cong = PCB Congeners (EPA 1668B), PCDD/PCDF = Polychlorodibenzodioxin/furan congener, PESTICIDE = Chlorinated Pesticides (EPA 1613B)

TR Number: 2--081611-002

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

USEPA Contract Laboratory Program
Generic Chain of Custody

AXYS2

Reference Case
Client No:
SDG No: L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8712 0180 5938 ~~8763 6441 7688~~ SB 8/16/11
Shipped to:	AXYS Analytical Services Ltd. 2045 Mills Road W. Sidney, BC V8L 5X2 (888) 373-0881

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 CW	8/16/11 1515		
2			
3			
4			

Sampler Signature: CW

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE01-T102 -AS-C	Surface Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (4)	11A-CE01-T102-AS-C	S: 8/16/2011	4:47	
11A-CE02-T014 -AS-C	Surface Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (4)	11A-CE02-TO14-AS-C	S: 8/16/2011	8:29	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

PAH/ALKYL = PAH and Alkylated PAH compounds (SW-84, PCB-Cong = PCB Congeners (EPA 1668B), PCDD/PCDF = Polychlorodibenzodioxin/furan congener, PESTICIDE = Chlorinated Pesticides (EPA 1613B)

TR Number: 2--081611-003

LABORATORY COPY

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USEPA Contract Laboratory Program
Generic Chain of Custody

AXYS 3

Reference Case
Client No:
SDG No: **L**

Date Shipped: 8/16/2011	**Chain of Custody Record**	**Sampler Signature:** C W	**For Lab Use Only**
Carrier Name: FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**	**Lab Contract No:**
Airbill: ~~8712 0180 6110~~ 5763 2411 7688 SB 8/16/11	1 C W 8/16/11 1575		**Unit Price:**
Shipped to: AXYS Analytical Services Ltd. 2045 Mills Road W. Sidney, BC V8L 5X2 (888) 373-0881	2		**Transfer To:**
	3		**Lab Contract No:**
	4		**Unit Price:**

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE02-T014-AT-C	Surface Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (4)	11A-CE02-TO14-AT-C	S: 8/16/2011	8:29	
11A-CE03-TTR2-AS-C	Surface Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (4)	11A-CE03-TTR2-AS-C	S: 8/16/2011	10:50	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G		**Custody Seal Intact?** ___ **Shipment Iced?** ___

PAH/ALKYL = PAH and Alkylated PAH compounds (SW-84, PCB-Cong = PCB Congeners (EPA 1668B), PCDD/PCDF = Polychlorodibenzodioxin/furan congener, PESTICIDE = Chlorinated Pesticides (EPA 1613B)

TR Number: 2--081611-004

LABORATORY COPY

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USEPA Contract Laboratory Program
Generic Chain of Custody

AXYS4

Reference Case
Client No:
SDG No: COM LPRRP L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8763 6411 7688
Shipped to:	AXYS Analytical Services Ltd. 2045 Mills Road W. Sidney, BC V8L 5X2 (888) 373-0881

Chain of Custody Record

Sampler Signature: CW

	Relinquished By (Date / Time)	Received By (Date / Time)
1	CW 8/16/11 1700	
2		
3		
4		

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE04-TTR1-AS-C	Surface Water/ Chris Whitton	L/G	PAH/ALKYL (21), PCB-Cong (10), PCDD/PCDF (10), PESTICIDE (21)	(Ice Only) (7)	11A-CE04-TTR1-AS-C	S: 8/16/2011	14:22	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
	11A-CE04-TTR1-AS-C				
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

PAH/ALKYL = PAH and Alkylated PAH compounds (SW-84, PCB-Cong = PCB Congeners (EPA 1668B), PCDD/PCDF = Polychlorodibenzodioxin/furan congener, PESTICIDE = Chlorinated Pesticides (EPA 1613B)

TR Number: 2--081611-012

LABORATORY COPY

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USEPA Contract Laboratory Program
Generic Chain of Custody

DESA 1

Reference Case: R
Client No:

Region:	2	**Date Shipped:**	8/16/2011	**Chain of Custody Record**	**Sampler Signature:** C Whitton
Project Code:		**Carrier Name:**	Courier	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		C W 8/16/11	
CERCLIS ID:	NJD980528996	**Shipped to:**	DESA Laboratories/EPA 2890 Woodbridge Ave Bldg. 209 Edison NJ 08837 (732) 906-6886	2	
Spill ID:	96			3	
Site Name/State:	Lower Passaic River Restoration Project/N.			4	
Project Leader:	George Molnar				
Action:					
Sampling Co:	CDM				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
11A-CE05-T2 R1-AS-C	Surface Water/ Chris Whitton	L/G	DOC / POC (10), HexCr (21), SSC / TDS (10), TOC (C-83) (10)	(Ice Only) (4)	11A-CE05-T2R1-AS-C	S: 8/15/2011	14:25	--
AB-08152011	Ambient Water/ Chris Whitton	L/G	HexCr (21)	(Ice Only) (1)	AB-08152011	S: 8/15/2011	17:15	Blank

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

DOC / POC = Dissolved Organic Carbon (SM5310B) / P, HexCr = Hexavalent Chromium (SM3500) (Dissolved), SSC / TDS = Suspended Solids Concentration (SM2540, TOC (C-83) = Total Organic Carbon (SM5310B)

TR Number: 2--081511-001

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

DESA 2

EPA USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: R
Client No:

Region:	2	**Date Shipped:**	8/16/2011	**Chain of Custody Record**	**Sampler Signature:** CW
Project Code:		**Carrier Name:**	Courier	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		1 CW 8/16/11 1500	
CERCLIS ID:	NJD980528996	**Shipped to:**	DESA Laboratories/EPA 2890 Woodbridge Ave Bldg. 209 Edison NJ 08837 (732) 906-6886	2	
Spill ID:	96			3	
Site Name/State:	Lower Passaic River Restoration Project/N.			4	
Project Leader:	George Molnar				
Action:					
Sampling Co:	CDM				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
11A-CE01-T102-AS-C	Surface Water/ Chris Whitton	L/G	DOC / POC (10), HexCr (21), SSC / TDS (10), TOC (C-83) (10)	(Ice Only) (4)	11A-CE01-T102-AS-C	S: 8/16/2011 4:47	--
11A-CE02-TO14-AS-C	Surface Water/ Chris Whitton	L/G	DOC / POC (10), HexCr (21), SSC / TDS (10), TOC (C-83) (10)	(Ice Only) (4)	11A-CE02-TO14-AS-C	S: 8/16/2011 8:29	--
11A-CE02-TO14-AT-C	Surface Water/ Chris Whitton	L/G	DOC / POC (10), HexCr (21), SSC / TDS (10), TOC (C-83) (10)	(Ice Only) (4)	11A-CE02-TO14-AT-C	S: 8/16/2011 8:29	Field Duplicate
11A-CE03-TTR2-AS-C	Surface Water/ Chris Whitton	L/G	DOC / POC (10), HexCr (21), SSC / TDS (10), TOC (C-83) (10)	(Ice Only) (4)	11A-CE03-TTR2-AS-C	S: 8/16/2011 10:50	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

DOC / POC = Dissolved Organic Carbon (SM5310B) / P, HexCr = Hexavalent Chromium (SM3500) (Dissolved), SSC / TDS = Suspended Solids Concentration (SM2540, TOC (C-83) = Total Organic Carbon (SM5310B)

TR Number: 2--081611-001

REGION COPY

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EPA USEPA Contract Laboratory Program
Generic Chain of Custody

DESA 3

Reference Case: R
Client No: CDMLPRRP

Region:	2	**Date Shipped:**	8/16/2011	**Chain of Custody Record**	**Sampler Signature:** CW
Project Code:		**Carrier Name:**	Courier	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		1 CW 8/16/11 1702	
CERCLIS ID:	NJD980528996	**Shipped to:**	DESA Laboratories/EPA 2890 Woodbridge Ave Bldg. 209 Edison NJ 08837 (732) 906-6886	2	
Spill ID:	96			3	
Site Name/State:	Lower Passaic River Restoration Project/N.			4	
Project Leader:	George Molnar				
Action:					
Sampling Co:	CDM				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
11A-CE04-TTR1-AS-C	Surface Water/ Chris Whitton	L/G	DOC / POC (10), HexCr (21), SSC / TDS (10), TOC (C-83) (10)	(Ice Only) (7)	11A-CE04-TTR1-AS-C	S: 8/16/2011 14:22	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:** 11A-CE04-TTR1-AS-C	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

DOC / POC = Dissolved Organic Carbon (SM5310B) / P, HexCr = Hexavalent Chromium (SM3500) (Dissolved), SSC / TDS = Suspended Solids Concentration (SM2540, TOC (C-83) = Total Organic Carbon (SM5310B)

TR Number: 2--081611-010

REGION COPY

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USEPA Contract Laboratory Program
Generic Chain of Custody

Microbac 1

Reference Case
Client No:
SDG No: COM-LRRP L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8759 3882 0333
Shipped to:	Microbac Laboratories, Inc. 250 W. 84th Drive Merrillville IN 46410 (219) 769-8378

Chain of Custody Record

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1	CW	8/16/11 1115		
2				
3				
4				

Sampler Signature: CW

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE05-T2R1-AS-C	Surface Water/ Chris Whitton	L/G	CH3Hg (21), CH3Hg-Diss (21), Hg (total) (10), Hg(disolv) (10)	(Ice Only) (4)	11A-CE05-T2R1-AS-C	S: 8/15/2011	14:25	
AB-08152011	Ambient Water/ Chris Whitton	L/G	CH3Hg (21), Hg (total) (10)	(Ice Only) (2)	AB-08152011	S: 8/15/2011	17:15	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___

CH3Hg = Methyl Mercury-Total (EPA 1630), CH3Hg-Diss = Methyl Mercury-Dissolved (EPA 1630), Hg (total) = Mercury-Total (EPA 1631), Hg(disolv) = Mercury-Dissolved (EPA 1631)

TR Number: 2--081611-007

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USEPA Contract Laboratory Program
Generic Chain of Custody

Microbac 3

Reference Case
Client No:
SDG No: COM-LPRRP L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8759 3882 0333
Shipped to:	Microbac Laboratories, Inc. 250 W. 84th Drive Merrillville IN 46410 (219) 769-8378

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
[signature]	8/16/11 1715		
2			
3			
4			

Sampler Signature: [signature]

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE01-T102 -AS-C	Surface Water/ Chris Whitton	L/G	CH3Hg (21), CH3Hg-Diss (21), Hg (total) (10), Hg(disolv) (10)	(Ice Only) (4)	11A-CE01-T102-AS-C	S: 8/16/2011	4:47	
11A-CE02-T014 -AS-C	Surface Water/ Chris Whitton	L/G	CH3Hg (21), CH3Hg-Diss (21), Hg (total) (10), Hg(disolv) (10)	(Ice Only) (4)	11A-CE02-TO14-AS-C	S: 8/16/2011	8:29	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

CH3Hg = Methyl Mercury-Total (EPA 1630), CH3Hg-Diss = Methyl Mercury-Dissolved (EPA 1630), Hg (total) = Mercury-Total (EPA 1631), Hg(disolv) = Mercury-Dissolved (EPA 1631)

TR Number: 2--081611-008

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USEPA Contract Laboratory Program
Generic Chain of Custody

Microbac 3

Reference Case
Client No:
SDG No: COM-LPRRP

L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8759 3882 0333
Shipped to:	Microbac Laboratories, Inc. 250 W. 84th Drive Merrillville IN 46410 (219) 769-8378

Chain of Custody Record

Sampler Signature: CW

	Relinquished By (Date / Time)	Received By (Date / Time)
1	CW 8/16/11 1802	
2		
3		
4		

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE02-T014 -AT-C	Surface Water/ Chris Whitton	L/G	CH3Hg (21), CH3Hg-Diss (21), Hg (total) (10), Hg(disolv) (10)	(Ice Only) (4)	11A-CE02-TO14-AT-C	S: 8/16/2011	8:29	
11A-CE03-TTR 2-AS-C	Surface Water/ Chris Whitton	L/G	CH3Hg (21), CH3Hg-Diss (21), Hg (total) (10), Hg(disolv) (10)	(Ice Only) (4)	11A-CE03-TTR2-AS-C	S: 8/16/2011	10:50	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

CH3Hg = Methyl Mercury-Total (EPA 1630), CH3Hg-Diss = Methyl Mercury-Dissolved (EPA 1630), Hg (total) = Mercury-Total (EPA 1631), Hg(disolv) = Mercury-Dissolved (EPA 1631)

TR Number: 2--081611-009

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USEPA Contract Laboratory Program
Generic Chain of Custody

Microbac 4

Reference Case
Client No:
SDG No: COM-LPRRP

L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8759 3882 0333
Shipped to:	Microbac Laboratories, Inc. 250 W. 84th Drive Merrillville IN 46410 (219) 769-8378

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
[signature]	8/16/11 1830		
2			
3			
4			

Sampler Signature: [signature]

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE04-TTR1-AS-C	Surface Water/ Chris Whitton	L/G	CH3Hg (21), CH3Hg-Diss (21), Hg (total) (10), Hg(disolv) (10)	(Ice Only) (8)	11A-CE04-TTR1-AS-C	S: 8/16/2011	14:22	

Shipment for Case Complete?	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
N	11A-CE04-TTR1-AS-C				
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G		**Custody Seal Intact?** ___	**Shipment Iced?** ___

CH3Hg = Methyl Mercury-Total (EPA 1630), CH3Hg-Diss = Methyl Mercury-Dissolved (EPA 1630), Hg (total) = Mercury-Total (EPA 1631), Hg(disolv) = Mercury-Dissolved (EPA 1631)

TR Number: 2--081611-011

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Shealy 1

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case
Client No:
SDG No: COM-LPRRP

L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8759 3882 0300
Shipped to:	Shealy Environmental 106 Vantage Point Drive West Columbia SC 29172 (803) 791-9700

Chain of Custody Record

Sampler Signature: CW

	Relinquished By (Date / Time)	Received By (Date / Time)
1	CW 8/16/11 1630	
2		
3		
4		

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE01-T102 -AS-C	Surface Water/ Chris Whitton	L/G	D-Met/Ti (10), T-Met/Ti (10)	(HNO3) (2)	11A-CE01-T102-AS-C	S: 8/16/2011	4:47	
11A-CE02-T014 -AS-C	Surface Water/ Chris Whitton	L/G	D-Met/Ti (10), T-Met/Ti (10)	(HNO3) (2)	11A-CE02-TO14-AS-C	S: 8/16/2011	8:29	
11A-CE05-T2R 1-AS-C	Surface Water/ Chris Whitton	L/G	D-Met/Ti (10), T-Met/Ti (10)	(HNO3) (2)	11A-CE05-T2R1-AS-C	S: 8/15/2011	14:25	
AB-08152011	Ambient Water/ Chris Whitton	L/G	T-Met/Ti (10)	(HNO3) (1)	AB-08152011	S: 8/15/2011	17:15	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

D-Met/Ti = Metals and Titanium-Dissolved (SW-846/6, T-Met/Ti = Metals and Titanium-Total (SW-846 / 602

TR Number: 2--081611-005

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USEPA Contract Laboratory Program
Generic Chain of Custody

Shealy 2

Reference Case
Client No:
SDG No: COM-LPRRP

L

Date Shipped:	8/16/2011
Carrier Name:	FedEx
Airbill:	8759 3882 0300
Shipped to:	Shealy Environmental 106 Vantage Point Drive West Columbia SC 29172 (803) 791-9700

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 CW	8/16/11 1630		
2			
3			
4			

Sampler Signature: CW

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
11A-CE02-T014 -AT-C	Surface Water/ Chris Whitton	L/G	D-Met/Ti (10), T-Met/Ti (10)	(HNO3) (2)	11A-CE02-TO14-AT-C	S: 8/16/2011	8:29	
11A-CE03-TTR 2-AS-C	Surface Water/ Chris Whitton	L/G	D-Met/Ti (10), T-Met/Ti (10)	(HNO3) (2)	11A-CE03-TTR2-AS-C	S: 8/16/2011	10:50	
11A-CE04-TTR 1-AS-C	Surface Water/ Chris Whitton	L/G	D-Met/Ti (10), T-Met/Ti (10)	(HNO3) (2)	11A-CE04-TTR1-AS-C	S: 8/16/2011	14:22	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
	11A-CE04-TTR1-AS-C				
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

D-Met/Ti = Metals and Titanium-Dissolved (SW-846/6, T-Met/Ti = Metals and Titanium-Total (SW-846 / 602

TR Number: 2--081611-006

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